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Marshall Star, July 20, 2011 Edition

# MARSHALL STAR

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## Marshall to Recognize Outstanding Team Members at Annual Honor Awards Ceremonies July 28

The Marshall Space Flight Center will honor over 200 employees and contractors during its Annual Honor Awards ceremonies in Morris Auditorium on July 28.

Marshall team members are invited to attend.

Awards presentations will be made during two ceremonies -- agency-level honor awards at 10 a.m. and center-level honor awards at 2 p.m. The morning ceremony will recognize those who have made significant achievements to NASA's mission at an agency level. The afternoon ceremony will recognize those who have made outstanding mission contributions to the center.



Bryan O'Connor, NASA chief of Safety and Mission Assurance and a former astronaut, will be the keynote speaker.

Announcing the awards will be Pamela Hanes, chief financial officer; Steven Miley, associate director for operations in the Engineering Directorate; Jonathan Pettus, chief information officer; Bobby Watkins, director of the Office of Strategic Analysis & Communications; and Bob Devlin, deputy director of the Office of Center Operations.

The welcome and presentation of awards will be made by Dale Thomas, Marshall manager of the Constellation Program, and Marshall Associate Director Robin Henderson, with acknowledgements at the end of the ceremonies.

For a list of the NASA Honor Awards, click [here](#).

For a list of the Marshall Honor Awards, click [here](#).

[› Back to Top](#)

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## NASA Begins Testing of Next Generation J-2X Rocket Engine

*By Jennifer Stanfield*



On July 14, NASA conducted a combined chill test and 1.9-second ignition test of the next-generation J-2X rocket engine that could help carry humans beyond low-Earth orbit to deep space.

***Image left: On July 14, NASA conducted a combined chill test and 1.9-second ignition test of the next-generation J-2X rocket engine on the A-2 Test Stand at NASA's Stennis Space Center. (NASA/Stennis)***

The test at NASA's Stennis Space Center is the first in a series of tests that will be conducted on the J-2X engine, which is being developed for the Marshall Space Flight Center by Pratt &

Whitney Rocketdyne.

"It's great to have the engine in the stand and finally give it a workout," said Mike Kynard, J-2X project manager at Marshall.

"While today's test was only a 1.9-second hot fire, we successfully loaded propellants, executed chill down procedures and started up the engine for the first time. I am extremely proud of the entire J-2X team for staying focused through development and into the testing phase of the project."

The ignition test on the A-2 Test Stand is the first of a series of firings over the next several months. Collected data will verify the engine functions as designed.

The J-2X engine uses liquid hydrogen and liquid oxygen as fuel, which can be mixed to generate 294,000 pounds of thrust to lift a spacecraft into low-Earth orbit or 242,000 pounds of thrust to power a spacecraft from low-Earth orbit into deep space. The engine is designed to start and restart in space.

For more information about the J-2X engine, visit:

[http://www.nasa.gov/mission\\_pages/j2x/](http://www.nasa.gov/mission_pages/j2x/)

*Stanfield is a public affairs officer in the Office of Strategic Analysis & Communications.*

[› Back to Top](#)

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## Shuttle Atlantis Crew Prepares for July 21 Landing

*By Sanda Martel*

At Marshall Star press time, space shuttle Atlantis astronauts were preparing for a July 21 landing after completing a 12-day mission to the International Space Station -- the last of the Space Shuttle Program.

***Image right: Space shuttle Atlantis photographed by International Space Station astronauts shortly after undocking July 19. (NASA TV)***

Atlantis undocked and backed away from the orbiting complex July 19, leaving behind almost a million pounds of international hardware and a fully supplied world-class science laboratory expected to function for at least another decade.



Atlantis will perform a final fly around of the space station and the crew will collect digital images and high-definition video of the complex. These will be the final views a space shuttle crew will ever have of the orbital outpost.

The first landing opportunity at Kennedy Space Center, Fla., is around sunrise, at 4:56 a.m. CDT.

STS-135 crewmembers include Commander Chris Ferguson, Pilot Doug Hurley and Mission Specialists Sandra Magnus and Rex Walheim.

The 37th and final visit of a space shuttle to the space station stocked the orbiting laboratory with as many supplies and spare parts as possible for sustenance of the outpost and its crews in the post-shuttle era.

Housed in Atlantis' payload during launch on July 8 was the Raffaello Multi-Purpose Logistics Module, which is managed by engineers at the Marshall Space Flight Center. The 21-foot-long, 15-foot-diameter cargo carrier delivered more than 9,000 pounds of supplies to the space station.

On July 12, Expedition 28 Flight Engineers Mike Fossum and Ron Garan completed a six-hour, 31-minute spacewalk, retrieving a failed pump module for return to Earth. They also installed two experiments and repaired a new base for the space station's robotic arm.

Fossum and Garan also installed on the space station exterior an experiment designed to demonstrate a new technology to robotically refuel satellites in space. During future tests, the Robotic Refueling Mission Experiment will demonstrate that remote-controlled robots can perform refueling tasks in orbit using commands sent from controllers on Earth. The experiment is expected to reduce costs and risks, and lay the foundation for future robotic servicing missions.

For 30 years, the space shuttle has been the U.S. human access to space. It has capabilities no other spacecraft can claim, and no other spacecraft is likely to match those capabilities in this generation.

With shuttle Atlantis home, the 30-year quest to push the boundaries of exploration, provide a new vision of the universe and construct an international way station in the sky will be completed.

For more information about the mission, visit [http://www.nasa.gov/mission\\_pages/shuttle/main/index.html](http://www.nasa.gov/mission_pages/shuttle/main/index.html).

## Shuttle Endeavour Crew Members Thank Marshall Team During Visit to Center July 13

By Sanda Martel

Two astronauts who flew the next-to-last space shuttle mission visited the Marshall Space Flight Center July 13 to thank the Marshall team for its contributions to their highly successful mission. Shuttle Endeavour launched May 16 to the International Space Station and landed June 1.



**Image left: Seven-year-old Sydney Newton, front row left, is presented with Beads of Courage from STS-134 astronauts Gregory Johnson and Michael Fincke, back row center, during the July 13 crew visit to Marshall, while her family looks on. Sydney's father, Jamie Newton, back row left, is an employee of CIBER Inc., a Marshall Center support contractor. Also pictured is Sydney's mother Cynthia and brother Dawson. The astronauts presented Newton with beads flown on space shuttle Endeavour. Beads of Courage is an organization in Tucson, Ariz., that provides innovative supportive care programs for seriously ill children and their families and the health care providers who care for them. Sydney battled cancer but has been cancer free for more than a year. During that time, she has received more than 450 beads – each representing a step in her treatment. (MSFC/Ray Downward)**

Pilot Gregory Johnson and Mission Specialist Michael Fincke presented highlights of their 16-day mission to an enthusiastic and appreciative audience in Morris Auditorium in Building 4200. Attending were employees, family members and special guests.

Johnson and Fincke thanked the Marshall team for their safe ride to orbit. The Marshall Center is responsible for the space shuttle's propulsion system, consisting of the main engines, solid rocket boosters with their solid rocket motors and external tanks. The three high-performing, reusable liquid-propellant rocket engines, along with the solid rocket boosters, provide more than 7.8 million pounds of thrust to lift the shuttle to orbit.

"Every single system has to work right, and our lives depend on it," Fincke told the crowd, "so thank you very much."

He also acknowledged Marshall's role for all science performed aboard the International Space Station: Marshall's Payload Operations Center in Building 4663 is the science command post for the space station. In its more than 10 years of operation, the operations center has supported more than 6,000 hours of science experiments and coordinated more than 1,100 experiments aboard the orbiting outpost.

"The history and tradition of Marshall is well appreciated," said Fincke. "Calls from the space station about science questions or problems come to Huntsville, not Houston."



The crowd responded enthusiastically to a video recorded by and featuring the six Atlantis crew members during their stay at the space station. Other STS-134 crew included Commander Mark Kelly, Mission Specialists Andrew Feustel and Greg Chamitoff, and European Space Agency astronaut Roberto Vittori.

***Image right: STS-134 astronaut Gregory Johnson signs Elijah Daniel's "space suit" during an autograph session following the STS-134 mission highlights presentation. (MSFC/Ray Downward)***

"NASA has made a difference," said Johnson, reflecting on the impact of the space station -- made possible by space shuttles. "The building of the International Space Station is something wonderful, and it will show us how to take the next step beyond low-Earth orbit."



For more information about the STS-134 mission, visit

[http://www.nasa.gov/mission\\_pages/shuttle/main/index.html](http://www.nasa.gov/mission_pages/shuttle/main/index.html)

*Martel, an AI Signal Research Inc. employee, supports the Office of Strategic Analysis & Communications.*

[› Back to Top](#)

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## **NASA Selects Nonprofit to Manage Space Station National Lab Research**

*Headquarters news release*

NASA has selected the Center for the Advancement of Science in Space Inc. (CASIS) to develop and manage the U.S. portion of the International Space Station that will be operated as a national laboratory. At the conclusion of successful negotiations, the independent, nonprofit research management organization will help ensure the station's unique capabilities are available to the broadest possible cross-section of the U.S. scientific, technological and industrial communities.

"The space station is the centerpiece of NASA's human spaceflight activities, and it is truly a national asset," NASA Administrator Charles Bolden said. "This agreement helps us ensure the station will be available for broad, meaningful and sustained use."

CASIS will be located at the Space Life Sciences Laboratory near NASA's Kennedy Space Center in Florida. The organization will increase station use to maximize the public's return on its investment by managing its diversified research and development portfolio based on needs for basic and applied research in a variety of fields. CASIS will identify opportunities for non-NASA uses linking scientific review and economic value, and will match potential research and development opportunities with funding sources. The organization also will increase awareness among schools and students about using the station as a learning platform.

NASA issued a cooperative agreement notice on Feb. 14 to seek a management partner for the portion of the station designated a national laboratory in 2005. The NASA Authorization Act of 2010, which extended station operations until at least 2020, also directed NASA to establish this organization. The cooperative agreement initially will have a value of up to \$15 million per year.

For more information about the International Space Station, visit:

<http://www.nasa.gov/station>

For more information about the space station as a national lab, visit:

[http://www.nasa.gov/mission\\_pages/station/research/nlab/](http://www.nasa.gov/mission_pages/station/research/nlab/)

[› Back to Top](#)

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## **Sing Us a Song, You're the Piano Man...NASA's Space Rock Song Contest Winners Visit Marshall to Meet STS-134 Astronauts They Helped Wake Up**



On July 13, the Plunkett family from Halfway, Mo., -- second-place winners in the NASA's Space Rock contest -- travelled to Huntsville to meet astronauts Gregory Johnson and Michael Fincke during the STS-134 crew visit at the Marshall Space Flight Center. From front left, Fincke, 14-year-old Joseph Plunkett, 10-year-old Loren Plunkett and Johnson. From back left, parents Brian Plunkett and Mary Plunkett. The Plunketts wrote and performed an original song, "Dreams You Give," that was used as the wakeup song May 30 for Endeavor astronauts during the STS-134 mission. More than a million votes were cast online by the general public to choose two songs from among 10

finalists to be played to the astronauts. To listen to the song, click [here](#). (NASA/Ray Downward)

[› Back to Top](#)

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## **Shuttle Buddies to Meet July 25**

The Shuttle Buddies will meet at 8:30 a.m., July 25, at Mullins Restaurant on Andrew Jackson Way. For more information, call Deemer Self at 256-881-7757.

**Find this article at:**

<http://www.nasa.gov/centers/marshall/about/star/index.html>